

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for processing image information, comprising:
 - receiving light comprising image information;
 - performing a first optical transform on the light to yield a first optically transformed light;
 - performing a second optical transform on the light to yield a second optically transformed light;
 - generating a first metric in accordance with the first optically transformed light;
 - generating a second metric in accordance with the second optically transformed light;
 - processing the first metric and the second metric to yield a processed metric; and
 - performing an inverse optical transform on the processed metric to process the image information of the light;
 - generating an image from the processed metric; and
 - displaying the image.
2. (Original) The method of Claim 1, wherein the first optical transform is substantially similar to the second optical transform.
3. (Previously Presented) The method of Claim 1, wherein the first optical transform is compatibly different from the second optical transform, such that the first and second optical transforms each target different aspects of the image information.
4. (Original) The method of Claim 1, wherein:
 - the first optical transform comprises a first Fourier transform; and
 - the second optical transform comprises a second Fourier transform.
5. (Original) The method of Claim 1, wherein processing the first metric and the second metric to yield a processed metric comprises:
 - selecting first data from the first metric;
 - selecting second data from the second metric; and
 - fusing the first data and the second data to yield the processed metric.

6. (Original) The metric of Claim 1, wherein processing the first metric and the second metric to yield a processed metric comprises:

generating the processed metric in response to the first metric and the second metric;
and

detecting a target using the processed metric.

7. (Canceled)

8. (Currently Amended) A system for processing image information,
comprising:

a plurality of optical transformers operable to receive light comprising image information, a first optical transformer operable to perform a first optical transform on the light to yield a first optically transformed light, a second optical transformer operable to perform a second optical transform on the light to yield a second optically transformed light;

a first processor operable to generate a first metric in accordance with the first optically transformed light;

a second processor operable to generate a second metric in accordance with the second optically transformed light;

an image processor operable to process the first metric and the second metric to yield a processed metric; and

an inverse optical transformer operable to perform an inverse optical transform on the processed metric to process the image information of the light;

generate an image from the processed metric; and

display the image.

9. (Original) The system of Claim 8, wherein the first optical transform is substantially similar to the second optical transform.

10. (Presently Presented) The system of Claim 8, wherein the first optical transform is compatibly different from the second optical transform, such that the first and second optical transforms each target different aspects of the image information.

11. (Original) The system of Claim 8, wherein:
the first optical transform comprises a first Fourier transform; and
the second optical transform comprises a second Fourier transform.
12. (Original) The system of Claim 8, wherein the image processor is operable to process the first metric and the second metric to yield a processed metric by:
selecting first data from the first metric;
selecting second data from the second metric; and
fusing the first data and the second data to yield the processed metric.
13. (Original) The system of Claim 8, wherein the image processor is operable to process the first metric and the second metric to yield a processed metric by:
generating the processed metric in response to the first metric and the second metric;
and
detecting a target using the processed metric.
14. (Canceled)

15. (Currently Amended) A system for processing image information, comprising:

- means for receiving light comprising image information;
- means for performing a first optical transform on the light to yield a first optically transformed light;
- means for performing a second optical transform on the light to yield a second optically transformed light;
- means for generating a first metric in accordance with the first optically transformed light;
- means for generating a second metric in accordance with the second optically transformed light;
- means for processing the first metric and the second metric to yield a processed metric; ~~and~~
- means for performing an inverse optical transform on the processed metric to process the image information of the light; and
- means for reporting results.

16. (Previously Presented) A method for processing image information, comprising:

- receiving light comprising image information;
- performing a first optical transform on the light to yield a first optically transformed light, the first optical transform comprising a first Fourier transform;
- performing a second optical transform on the light to yield a second optically transformed light, the second optical transform comprising a second Fourier transform, the first optical transform substantially similar to the second optical transform or compatibly different from the second optical transform;
- generating a first metric in accordance with the first optically transformed light;
- generating a second metric in accordance with the second optically transformed light;
- processing the first metric and the second metric to yield a processed metric by performing a procedure selected from the group consisting of a first procedure and a second procedure, the first procedure comprising: selecting first data from the first metric, selecting second data from the second metric, and fusing the first data and the second data to yield the processed metric, and second procedure comprising: generating the processed metric in response to the first metric and the second metric, and detecting a target using the processed metric;
- performing an inverse optical transform on the processed metric to process the image information of the light;
- generating an image from the processed metric; and
- displaying the image.

17. (Currently Amended) A system for performing processing upon an image, said system comprising:

- a first optical transformer operable to perform a first optical transform on received light;

- a second optical transformer operable to perform a second optical transform on said received light;

- a first sensor in communication with said first optical transformer to sense the optically transformed light and generate a first signal describing information of the light;

- a second sensor in communication with said second optical transformer to sense the optically transformed light and generate a second signal describing information of the light;

- a first processor in communication with said first sensor to receive said first signal and to generate first data describing one or more features of said image;

- a second processor in communication with said second sensor to receive said second signal and to generate second data describing said one or more features of said image;

- a third processor receiving said first and second data metrics and forming a fused image signal therefrom;

- an inverse transformer receiving the fused image signal and performing an inverse transform for said first optical transform and a second inverse transform for said second optical transform; and

- a display receiving inversely transformed image data from said inverse transformer and displaying an image therefrom.

18. (Previously Presented) The system of claim 17 wherein said first and second optical transforms are selected from the group consisting of:

- a Fourier transform; and

- a geometric transform.